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www.proactive-lightscaping.philips.com
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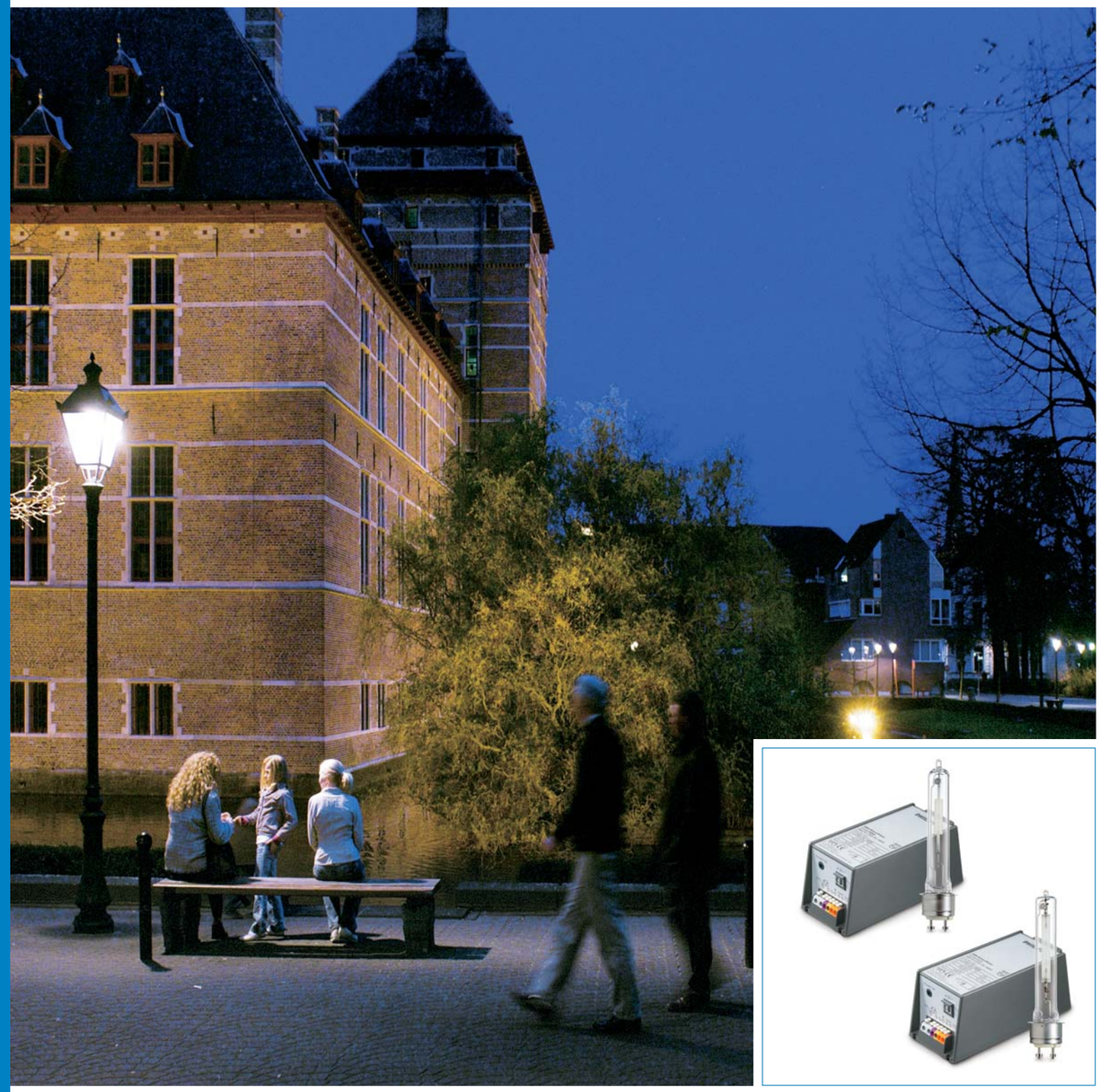


CosmoPolis

The foundations of change

PHILIPS

CosmoWhite brings long-lasting white light to Antwerp, Belgium, riverfront (Schréder)

Change

CosmoPolis - Building on the foundations

Philips' invention of the low-pressure sodium (SOX) lamp and linear fluorescent lamp in the 1930's laid the foundations for today's outdoor lighting. Though in the 1960's the favoured light sources became SON and HPL, the benefits remained the same: the team of white and gold lamps met your perceived needs for inexpensive white light where light quality mattered, and unbelievably low ownership costs where it did not.

With CosmoPolis, Philips presents to you another major step forward in urban lighting, developed specifically to build on these foundations, and also to meet the challenges you face in the 21st century. CosmoPolis simplifies lamp selection for you with a family of two matching miniaturised lamps, CosmoWhite and CosmoGold, and two optimised electronic gear systems. The cost-cutting and performance benefits of CosmoPolis are impressive:

- Extremely high system energy efficiency, cutting energy consumption by 10% compared with SON, 30% compared with MASTER Colour and up to 150% compared with HPL.
- Improved optical performance, thanks to optimal burner aspect ratio and positioning, and new locking base design.
- Miniaturisation - lamps are 65% smaller than SON/HPL and gear 50% smaller; to provide unprecedented freedom in the design of optics and luminaires.
- Longer service life than CDM-T lamps, and better lumen maintenance than CDO-TT or HPL lamps.
- Reliable outdoor dedicated electronic gear, guaranteed for five years, saves energy and future-proofs installations for developments in centralised light control.
- Environmentally friendly - a Green Flagship product to minimise environmental impact, and CO_2 emission.

With CosmoPolis, the benefits you experience from using Philips' advanced outdoor HID lamps are more impressive than ever.

CosmoWhite

CosmoGold

Lamp choice is now a simple matter - CosmoWhite or CosmoGold

CosmoPolis meets your current outdoor lighting needs.

The trends are to:

- Energy efficiency and long, reliable service lives, not only to reduce your lighting ownership costs but also to comply with new environmental pressures.
- Improved security and ambience to attract people back into your city centres at night.
- Miniaturisation, to permit unobtrusive lighting and exciting new luminaire designs.

CosmoWhite

With its white light, CosmoWhite improves the appearance of buildings, parks and the people who visit them. There is growing evidence that it also makes areas of mixed pedestrian and road traffic a safer place to be.

Improved safety

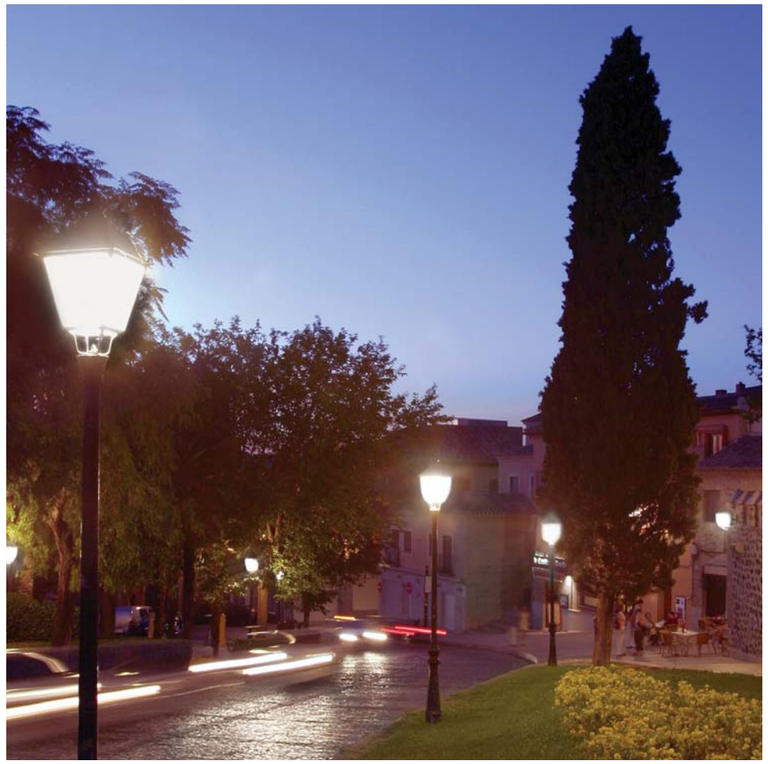
- White light improves the visibility of objects and people at the sides of your vision. For a motorist this for example means a better chance of spotting potential hazards on footpaths, cycle lanes and at park entrances.

White light appears brighter than golden light at the same measured illuminance

- This is due to two factors: the eye's increased sensitivity to white light at low light levels, and improved colour contrast from better colour rendering. Because you see better, you are less likely to have accidents.

White light is socially attractive

- White light gives you a better sense of safety due to the ability to see objects and facial features clearly in bright, colourful surroundings. This makes you more inclined to socialise.



CosmoGold

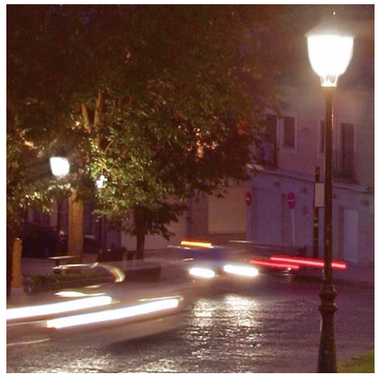
CosmoGold

Economical CosmoGold has an essential role to play in your road and floodlighting.

- Low ownership costs reduce pressure on lighting budgets. This liberates cash for investment in urban renewal schemes involving white light.
- Off-axis visibility is not needed on major roads. In fact, it can be a distraction.
- The warmth of masonry such as sandstone is enhanced with golden light. Also, you can use white and gold together in floodlighting schemes to display architectural features by colour contrast.
- Golden light can act as a signpost. Routes through city centres lit with CosmoGold stand out clearly if surrounding areas are lit with CosmoWhite.
- CosmoGold is kind to the elderly. Old people with yellowing corneas may actually see better by its light.

CosmoWhite installed in around the Palace of Justice in Turnhout, Belgium (Schréder)

Efficiency



Even better lighting at even lower costs

CosmoPolis cuts the cost of your lighting ownership in three ways:

Increased luminous efficacy

Improvements to burner design and vapour salts have increased luminous efficacy, meaning that you can replace the SON/CDM 70W, 100W and 150W team by CosmoGold/CosmoWhite 60/65W, 90W or 140W lamps without loss of light levels but with useful energy savings.

SON/CDM 70W	→	CosmoWhite/CosmoGold 60/65W
SON/CDM 100W	→	CosmoWhite/CosmoGold 90W
SON/CDM 150W	→	CosmoWhite/CosmoGold 140W

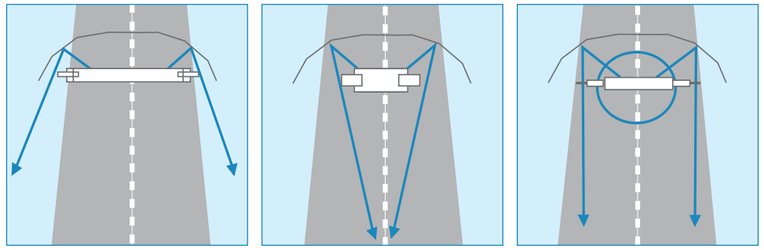
CosmoPolis is not retrofit with any existing lamps, but offers you impressive benefits for new or renewed installations

Reduced gear losses

Innovative electronic gear increases overall system efficiency from 83% to 92% for further energy savings.

Improved optical performance

The optimised design and exactly aligned positioning of the burner via the twist-and-lock lamp cap, have allowed a substantial improvement in optical performance. This means your luminaires can be spaced some 10% further apart: you need fewer light points to achieve the desired lighting performance.

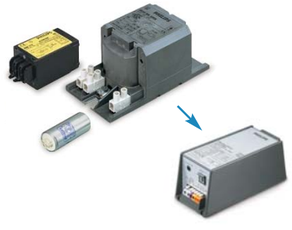


SON - Beam too wide

CDM-CDO - Beam too narrow

CosmoPolis - Exactly right

65% smaller than SON and HPI/CDO lamps - design flexibility for small, high-performance luminaires



One-component gear only half the size of electromagnetic gear - design flexibility and reliability

Optimum burner-geometry (aspect-ratio) - highest optical performance

Improved gas filling - high luminous efficacy

Reinforced pinch - long, reliable life

Twist-lock cap - security and perfect burner alignment

Full lightning protection/fully potted box - protecting components against lightning, dust, moisture and vibrations during an outdoor long-life (60,000 hours)

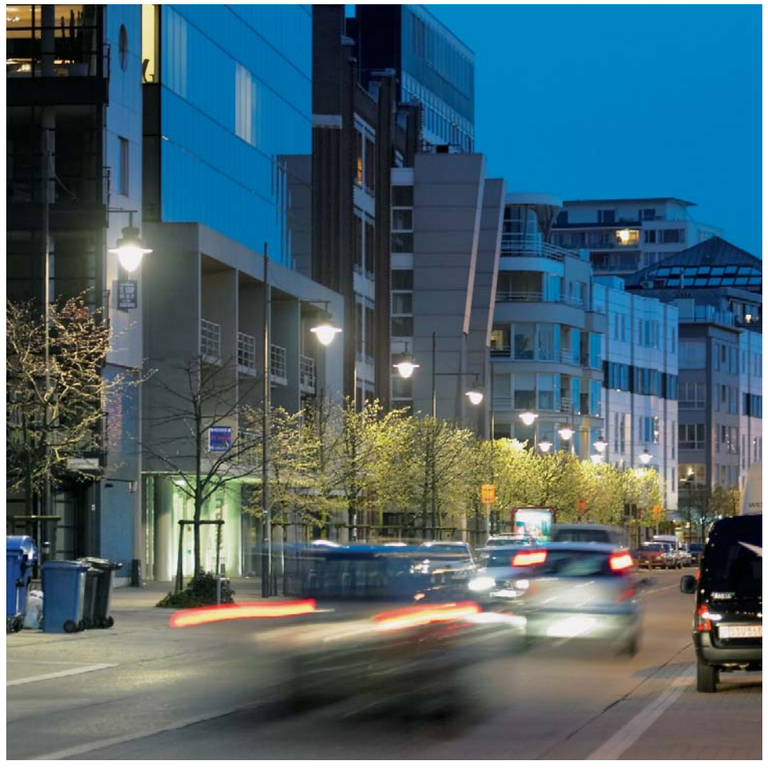
Miniaturisation to meet the needs of today

Miniaturisation is much more than a design trend.

It means:

- Less materials used to conserve resources.
- Smaller, lightweight luminaires with light-duty poles to conserve resources and reduce capital cost.
- Easier end-of-life disposal under WEEE regulations.

CosmoWhite and CosmoGold are 65% smaller than equivalent HPI/CDO and SON lamps. CosmoPolis dedicated electronic gear is half the size of HPI/CDO and SON electromagnetic gear.



Reliability

Even more reliable lamps…

CosmoWhite has a service life of three years (12,000 hours) with a lumen maintenance of 80% and more than 90% survivors. CosmoGold has a service life of four years (16,000 hours) with a lumen maintenance of 90% and more than 90% survivors.

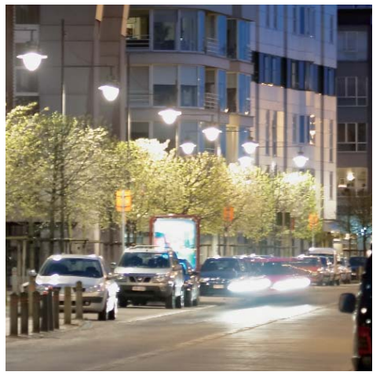
By comparison:

- CDM-T has only a two-year service life.
- CDO-TT and HPL have a three-year service life but a lumen maintenance of only 60%.

…and electronic control gear as well!

Philips' dedicated HID-PrimaVision control gear for CosmoPolis lamps has a service lifetime of 60,000 hours (95% survivors). And since electronic control gear eliminates the need for power factor correction capacitors and ignitors, system failures caused by these components are also eliminated.

Electronics



The benefits of electronic control gear

Like many of the latest lamps, CosmoPolis lamps are only designed to run on electronic control gear. This is because electronic gear gives you such overwhelming advantages that it is rapidly rendering electromagnetic gear obsolescent.

- High system efficiency to save energy.
- Compact size and low weight provide design flexibility and easy installation.
- Mains voltage fluctuations do not affect light output, so costs can be reduced by specifying lighter-duty cabling and/or fewer switching cabinets.
- No power factor correction needed so no capacitors to fail.
- Only one component to simplify servicing.

Above all, an electronic installation is future-proofed, ready for the addition of centralised control systems.

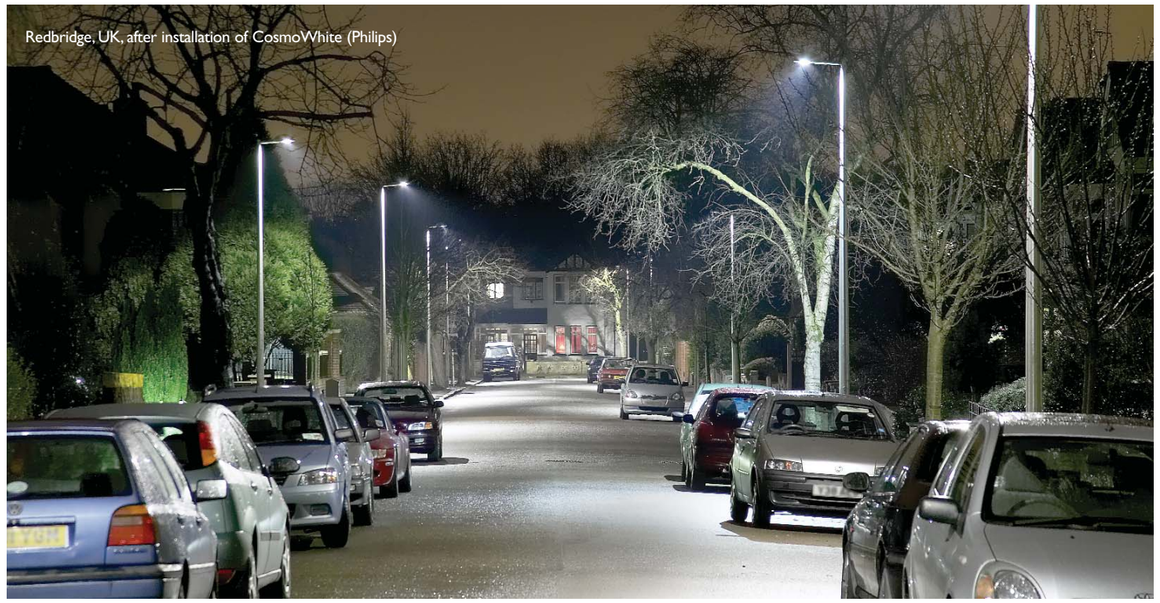
Philips - the preferred supplier of electronic gear for today's advanced lamps

Philips' HID-PrimaVision electronic control gear is your logical choice, since CosmoPolis lamps and gear were developed together to ensure perfect compatibility and reliability.

In addition:

- Gear has outdoor long-life heavy-duty specification, hence its name 'Xtreme' (60.000 hours).
- Peak voltage protection to safeguard lamp, and surge protected to safeguard gear.
- Full lightning protection, EMC/EMI compliance.
- Fully potted box, protecting components against dust, moisture and vibrations.
- You deal only with one trusted supplier for the entire system.

CosmoWhite makes the road along the Alster in Hamburg, Germany, a safer place (WE-EF)



Philips introduces ground breaking CosmoPolis lighting system to the London Borough of Redbridge - United Kingdom.

Redbridge is a very forward looking borough always keen to adopt environmentally friendly solutions thereby conserving energy. As Mick Trussler of the London Borough points out, "In Redbridge we are not only looking for new technology to improve our street lighting but we want to ensure that we implement the new CEN standards which have recently been released. By adopting the new Philips CosmoPolis lamp and Starsense Telemanagement system we have achieved our goals. We are more than pleased with the results."

Environment

CosmoPolis - a good friend to the environment; reassurance for you

Environmental issues become increasingly important, and Philips adopts an ecological approach, not just over a lamps' service life but from the moment of its design conception right through to the day its components are recycled into new lamps.

Because of its outstanding ecological performance, CosmoPolis is one of Philips' Green Flagship products:

- High efficacy and low gear losses cut CO_2 greenhouse gas emissions.
- Long life reduces resources needed to manufacture replacement lamps and gear and reduces recycling burden.
- Miniaturisation of lamps and gear cuts material use both in manufacture and packaging and transport volume.
- Lamps contain little or no hazardous materials (low mercury, zero lead). Gear is lead-free.

Philips is Market Leader in Corporate Sustainability at the Dow Jones Sustainability Index in both 2004 and 2005.

Member of Dow Jones Sustainability Indexes 04

Member of Dow Jones Sustainability Indexes 05

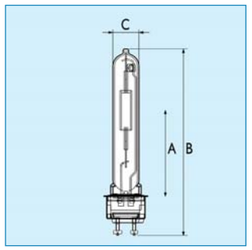
Energy Efficiency · Lifetime Reliabilty · Hazardous Substances · Weight

Technical specifications

MASTER CosmoWhite/CosmoGold

Commercial name	Lamp base	Lamp wattage (W)	Lamp voltage (V)	Colour temp (K)	Colour rendering Ra*	Lumen at maintenance service lifetime	Order code EOC
CosmoWhite 60W/728	PGZ 12	60	230	2800	65-70	80% (design spec)	208514 15
CosmoWhite 140W/728	PGZ 12	140	230	2800	60-70	80% (design spec)	208538 15
CosmoGold 65W/220	PGZ 12	65	230	2000	20	90% (design spec)	***
CosmoGold 140W/220	PGZ 12	140	230	2000	20	90% (design spec)	***

Commercial name	Lamp current (A)	Light output (Lm)	Target service lifetime (h)**	Lamp dimensions (mm) A	B	C
CosmoWhite 60W/728	0.63	6,900	12,000	59	128	19
CosmoWhite 140W/728	1.5	16,500	12,000	66	143	19
CosmoGold 65W/220	1.2	6,600	16,000	59	128	19
CosmoGold 140W/220	2.5	16,500	16,000	66	143	19



* Lamps can be operated in all positions, colour temperature and colour rendering is position dependent (vertically/horizontally)

** Still to be confirmed

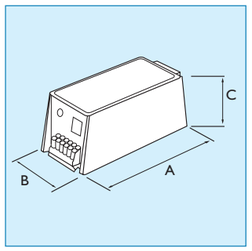
*** Available end 2005

- UV Block — similar to MASTER Colour
- Dimmability — CosmoWhite : down to 50% light output (= 60% power)
  CosmoGold : down to 25% light output (= 35% power)

CosmoWhite/CosmoGold HID-PrimaVision Xtreme

Commercial name	Nominal system power (W)	Nominal lamp power (W)	Nominal power loss gear (W)	Expected lifetime max 5% failure rate (Tcase nominal)	Ambient temperature range (°C)	Rated mains voltage (V)
CosmoWhite HID-PV X 60W	65	60	5.0	60.000h	-30/+50	220-240
CosmoWhite HID-PV X 140W	151.4	140	11.4	60.000h	-30/+50	220-240
CosmoGold HID-PV X 65W	71.5	66	5.5	60.000h	-30/+50	220-240
CosmoGold HID-PV X 140W	151.4	140	11.4	60.000h	-30/+50	220-240

Commercial name	Mains freq. (Hz)	Power factor (nom)	Gear dimensions (mm) A	B	C
CosmoWhite HID-PV X 60W	50/60	0.98	135	65	65
CosmoWhite HID-PV X 140W	50/60	0.98	150	65	65
CosmoGold HID-PV X 65W	50/60	0.98	135	65	65
CosmoGold HID-PV X 140W	50/60	0.98	150	65	65



Availability

CosmoWhite 60W - 140W systems	available
CosmoGold 65W - 140W systems	end 2005
Dimmable gear	end 2006
CosmoWhite and CosmoGold 90W systems	second half 2006
CosmoWhite 35W systems	end 2006